

In re Application of MARTINSEN et al.
Serial No. 09/677,445

REMARKS

The Office action has been carefully considered. The Office action rejected claims 1-29 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,266,681 to Guthrie ("Guthrie") in view of U.S. Patent No. 6,668,369 to Kerbs et al. ("Kerbs"). Further, the Office action rejected claims 18-29 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants respectfully disagree.

By present amendment, claims 1, 18, 24, 25, and 29 have been amended. Claims 7 and 8 are cancelled. Applicants submit that the claims as filed were patentable over the prior art of record, and that the amendments previously made were for purposes of clarifying the claims and/or for expediting allowance of the claims and not for reasons related to patentability. Reconsideration is respectfully requested.

Applicants thank the Examiner for the interview held (by telephone) on September 7, 2005. During the interview, the Examiner and applicants' attorney discussed the claims with respect to the prior art. The essence of applicants' position is incorporated in the remarks below.

Prior to discussing reasons why applicants believe that the claims in this application are clearly allowable in view of the teachings of the cited and applied references, a brief description of the present invention is presented.

The present invention is directed, generally, to a method for handling DHTML (Dynamic HyperText Markup Language) behaviors in web pages. A DHTML behavior is typically characterized as a component associated with an element in a web page, wherein the component encapsulates some additional

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functionality or "behavior". For example, an element, such as JPEG picture of a balloon, may have an associated DHTML behavior that causes the balloon to move upward in the web page when the JPEG picture is clicked. When applied to a standard HTML element on a page, a DHTML behavior component may enhance that element's default behavior.

In the past, a DHTML behavior was attached in a loosely associated way (i.e., hyperlinking or through using a code injector system) to the respective element. That is, the code representing the behavior was separate (but still associated) with the code representing the element. When a web page was accessed by a browser and subsequently interpreted (element by element), the behavior was not interpreted until instantiated in order to save time and computing power. The behavior component remained attached to an associated element but was not executed until some behavior activation condition was met, i.e., left-clicking in the above example.

According to an embodiment of the present invention, however, the DHTML behavior may be synchronously bound to an associated element. The code representing the behavior may be intermixed with the code representing the element. When a web page is accessed by a browser and subsequently interpreted (again element by element), the behavior may be instantiated prior to the interpretation of the associated element. Because the behavior component is bound to the element, the behavior component may be interpreted before the element is interpreted so that the element may be presented properly when displayed. Furthermore, if the element is moved to another web page or the

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hierarchical structure of the current web page is changed, the behavior will remain synchronously bound to the element such that the element will behave as expected without having to deal separately with the behavior.

Note that the above description is for example and informational purposes only, and should not be used to interpret the claims, which are discussed below.

Rejections under §101

The Office action rejected claims 18-29 as being directed to non-statutory subject matter. More specifically, the Office action contends that claims 18-29 are directed to a computer-readable medium and goes further to suggest that the specification recites a limitation on the term computer-readable medium as a signal, carrier wave, transmission, optical wave, etc. Page 11, lines 3-9 of the applicants' specification is cited. Applicants respectfully disagree.

As presented in a previous Office action response, section 2106(IV)(B)(1)(a) of the MPEP states that functional descriptive material that is recorded on some computer-readable medium is structurally and functionally interrelated to the medium and is statutory since use of technology permits the function of the descriptive material to be realized. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *In re Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim). Carrier waves and modulated signals are examples of data that may be interpreted by a computer (i.e., a computer-readable medium) and may also be considered a

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product-by-process which is also statutory per se if the underlying process is statutory. Furthermore, the MPEP specifically states (section 2106(IV)(B)(1)(c)) that a signal claim directed to a practical application is statutory regardless of its transitory nature. See *O'Reilly*, 56 U.S. at 114-19; *In re Breslow*, 616 F.2d 516, 519-21, 205 USPQ 221, 225-26 (CCPA 1980). Recent court decisions have also held that "signals" are proper statutory subject matter. See *Arrhythmia Research Technology, Inc. v. Corazonix Corp.*, 958 F.2d 1053, 22 USPQ.2d 1033 (CCPA 1992), (wherein the court held that the view that there is nothing necessarily physical about "signals" is incorrect and that computer-program related inventions can be claimed in terms of "signals" as computers operate according to signals. In fact, anything that is being manipulated or transformed can typically be drafted in terms of "signals").

Notwithstanding this, claims 18, 24, 25, and 29 have been amended to recite a tangible computer-readable medium, including, for example, when any part is loaded into memory. Certainly a tangible computer-readable medium having computer-executable instructions constitutes statutory subject matter. For at least these reasons, applicants request that the §101 rejection of claims 18-29 be withdrawn.

Rejections under §103

Turning to the obviousness rejections, amended claim 1 recites in a computer system, a method comprising interpreting a page, the page comprising an import instruction that references a behavior component coded in a dynamic hypertext markup language and an element synchronously bound to the behavior

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component, and determining a behavior of the element on the page by instantiating the behavior component in accordance with the import instruction prior to interpreting the element.

The Office action rejected claim 1 as being unpatentable over Guthrie in view of Kerbs. More specifically, the Office action contends that Guthrie teaches a method comprising interpreting a page, the page comprising an import instruction that references a behavior component and an element linked to the behavior component. Column 5, lines 14-18 and 33-34 of Guthrie are referenced. Further, the Office action contends that Guthrie teaches determining a behavior of the element on the page by instantiating the behavior component in accordance with the import instruction prior to interpreting the element. Column 5, lines 26-29 of Guthrie are referenced.

The Office action acknowledges that Guthrie does not teach a behavior component coded in a dynamic hypertext markup language. However, the Office action contends that Kerbs does teach a behavior component coded in a dynamic hypertext markup language. The Office action concludes that combining the teachings of Guthrie with the teachings of Kerbs would have been obvious to a person skilled in the art at the time the invention was made because it would have allowed Web developers to implement modularity in their site designs in order to simplify updates and alterations. Applicants respectfully disagree.

To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in

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judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01.

Guthrie teaches, generally, a method and system for injecting code into a web document prior to interpretation. More specifically, the cited and applied section of Guthrie discloses an injector system operable to inject code (code that may represent a behavior) into an HTML document (but not attached to any element, much less bound). When an HTML document is requested by a browser, the injector system "intercepts" the returning HTML document, injects some HTML code into the HTML document in the form of an injectable component, and then passes the modified HTML document to the browser for interpretation in a normal manner. See, generally column 5, lines 13-34. Consequently, the browser is unaware (i.e., the injection is transparent to the browser) of any change to the HTML document and interprets the modified HTML document according to known conventional methods regardless of what HTML code may have been injected.

As argued in a previous Office action response, Guthrie does not disclose a behavior that is bound to an element as claimed by applicants. Moreover, the system and method in Guthrie is neither concerned with nor even aware of the nature of the injectable component and certainly cannot be construed to teach a

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synchronously bound behavior. The very nature of loading a page and then injecting additional content is not synchronous. Thus, even if one were to somehow interpret injectable content as an attached behavior (which it is not) this still does not make it synchronously bound (i.e., persistently and continuously bound to the element). In fact, the method of the present invention may be practiced in succession to the methods taught by Guthrie. Guthrie does not teach or even suggest the manner of how to interpret the modified HTML document once passed to the browser since the injection method is transparent to the browser. Therefore, the modified HTML document will still be interpreted like any other HTML document. That is, the HTML document will be interpreted element by element such that any included or even attached behavior component (DHTML or otherwise) will only be interpreted when activated.

Additionally, the combination of Guthrie with the teachings of Kerbs is counterintuitive since the system of Guthrie is specifically directed to injecting code to be parsed by the browser. It simply does not make sense to inject DHTML code into an HTML document in Guthrie because the intended purpose of using DHTML code in the present invention is to avoid the necessity of injecting additional code into a web page. That is, the external components that may be instantiated by reference to synchronously bound DHTML code is beneficial because no code is injected. Such a combination is illogical, and to suggest that the teachings of Kerbs (general DHTML awareness) would render obvious the recitations of claim 1 is impermissibly broad and conclusory. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not

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evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Further, if anything, the references teach away from such a combination, as discussed above.

For at least the foregoing reasons, applicants submit that claim 1 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 2-17, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 1 and consequently includes the recitations of independent claim 1. As discussed above, Guthrie and Kerbs, whether considered separately or in any permissible combination with each other or any other prior art of record, fails to teach or suggest the recitations of claim 1 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 1 noted above, each of these dependent claims includes additional patentable elements.

For example, claim 9 recites that the behavior component comprises content, and wherein instantiating the behavior component comprises inserting the content into the page. Guthrie cannot possibly be construed to teach a behavior component that, when instantiated, acts in this way. In effect, for claim 9 to read on the prior art, Guthrie would have to disclose that its injectable component is, in turn, a component itself for injecting additional code (or content). Thus, it is counterintuitive and illogical to the system of Guthrie to inject code that is operable to inject yet more code. Applicants submit that for at least this additional reason, claim 9 is allowable over the prior art of record.

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Turning to the next independent claim, amended claim 18 recites a tangible computer-readable medium having computer-executable instructions comprising interpreting a page to create a document structure, the page comprising an instruction to instantiate a behavior component that is coded in a dynamic hypertext markup language and synchronously bound to an element, instantiating the behavior component in accordance with the instruction, instantiation of the behavior component creating a document fragment, and maintaining the document fragment separate from the document structure.

The Office action rejected claim 18 as being obvious, citing the same rationale used in the rejection of claim 1. Applicants respectfully disagree.

As discussed above, to establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art; (*In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)), and "all words in a claim must be considered in judging the patentability of that claim against the prior art;" (*In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)). Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997). Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible. See MPEP § 2143.01.

Again, Guthrie teaches, generally, a method and system for injecting code into a web document prior to interpretation. More specifically, the cited and applied section of Guthrie discloses an injector system operable to inject code into an

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HTML document that is neither attached nor synchronously bound. When an HTML document is requested by a browser, the injector system "intercepts" the returning HTML document, injects some HTML code into the HTML document in the form of an injectable component, and then passes the modified HTML document to the browser for interpretation in a normal manner. See, generally column 5, lines 13-34. Consequently, the browser is unaware (*i.e.*, the injection is transparent to the browser) of any change to the HTML document and interprets the modified HTML document according to known conventional methods regardless of what HTML code may have been injected.

As argued in a previous Office action response, Guthrie does not disclose a behavior bound to an element as claimed by applicants. Moreover, the system and method in Guthrie is neither concerned with nor even aware of the nature of the injectable component and certainly cannot be construed to teach a synchronously bound behavior. The very nature of loading a page and then injecting additional content is not synchronous. Thus, even if one were to somehow interpret injectable content as a bound behavior (which it is not) this still does not make it synchronous (*i.e.*, persistently and continuously bound to the element).

Furthermore, the Office action simply does not address the claim language directed to creating a document fragment, and maintaining the document fragment separate from the document structure. If anything, the injected content of Guthrie (which may possibly be construed to be a document fragment) is stored directly with the loaded web page (this is only an assumption since Guthrie is silent with respect to where the HTML code is actually stored).

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Additionally, the combination of Guthrie with the teachings of Kerbs is counter-intuitive since the system of Guthrie is specifically directed to injecting code to be parsed by the browser. It simply does not make sense to inject DHTML code into an HTML document in Guthrie because the intended purpose of using DHTML code in the present invention is to avoid the necessity of injecting additional code into a web page. To suggest that the teachings of Kerbs (general DHTML awareness) would render obvious the recitations of claim 18 is impermissibly broad and conclusory. For at least the foregoing reasons, applicants submit that claim 18 is allowable over the prior art of record.

Applicants respectfully submit that dependent claims 19-23, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 18 and consequently includes the recitations of independent claim 18. As discussed above, Guthrie and Kerbs, whether considered individually or in any permissible combination with each other or any other prior art of record, fail to teach or suggest the recitations of claim 18 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 18 noted above, each of these dependent claims includes additional patentable elements.

Turning to the next independent claim, amended claim 24 recites a tangible computer-readable medium having computer-executable instructions, comprising synchronously binding an element placed in a page to a behavior component, the behavior component coded in a dynamic hypertext markup language and including content therein, interpreting the page to form a document structure, when

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interpreting the element, instantiating the behavior component to determine a behavior of the element on the page, the behavior including a pointer to the content, instantiating the behavior component to create a document fragment, the document fragment maintained separately from the document structure, accessing the content via the pointer, and inserting the content into a representation of the page.

The Office action rejected claim 24 as being obvious. Once again, column 5, lines 14-18, 26-29 and 33-34 of Guthrie have been referenced. Applicants respectfully disagree.

Again, Guthrie teaches, generally, a method and system for injecting code into a web document prior to interpretation but does not teach attaching, binding, or synchronously binding a behavior to an element. As argued in a previous Office action response, Guthrie does not disclose a behavior bound to an element as claimed by applicants. Moreover, the system and method in Guthrie is neither concerned with nor even aware of the nature of the injectable component and certainly cannot be construed to teach a synchronously bound behavior. The very nature of loading a page and then injecting additional content is not synchronous. Thus, even if one were to somehow interpret injectable content as a bound behavior (which it is not) this still does not make it synchronous (*i.e.*, persistently and continuously bound to the element). Kerbs, whether considered alone or in any permissible combination with Guthrie, does not cure this major deficiency of Guthrie.

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Furthermore, the Office action simply does not address the claim language directed to creating a document fragment, and maintaining the document fragment separate from the document structure. If anything, the injected content of Guthrie (which may possibly be construed to be a document fragment) is stored directly with the loaded web page. Of course, this is an assumption since Guthrie is silent with respect to where the HTML code is actually stored. Applicants submit that claim 24 is allowable over the prior art of record for at least these reasons.

Turning to the next independent claim, amended claim 25 recites a tangible computer-readable medium having computer-executable components comprising, a behavior component coded in a dynamic hypertext markup language, an import instruction component in a page, the import instruction configured to call for instantiation of the behavior component during a parsing of the page and further configured to associate the behavior component with the page, and an element in the page that is defined by a behavior of the behavior component and configured such that, during the parsing of the page, the element synchronously binds with the behavior component and applies the behavior.

The Office action rejected claim 25 as being obvious. Column 5, lines 14-18, 26-29 and 33-34 of Guthrie have been referenced. Applicants respectfully disagree..

Again, Guthrie teaches, generally, a method and system for injecting code into a web document prior to interpretation which is neither binding nor synchronous. Guthrie does not disclose a behavior bound to an element as claimed by applicants. Moreover, the system and method in Guthrie is neither

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concerned with nor even aware of the nature of the injectable component and certainly cannot be construed to teach a synchronously bound behavior. The very nature of loading a page and then injecting additional content is not synchronous. Thus, even if one were to somehow interpret injectable content as a bound behavior (which it is not) this still does not make it synchronous (*i.e.*, persistently and continuously bound to the element). Kerbs, whether considered alone or in any permissible combination with Guthrie, does not cure this major deficiency of Guthrie. Applicants submit that claim 25 is allowable over the prior art of record for at least these reasons.

Applicants respectfully submit that dependent claims 26-28, by similar analysis, are allowable. Each of these claims depends either directly or indirectly from claim 25 and consequently includes the recitations of independent claim 25. As discussed above, Guthrie and Kerbs, whether considered separately or in any permissible combination with each other or any other prior art of record, fail to disclose the recitations of claim 25 and therefore these claims are also allowable over the prior art of record. In addition to the recitations of claim 25 noted above, each of these dependent claims includes additional patentable elements.

Turning to the last independent claim, amended claim 29 recites a tangible computer-readable medium having computer-executable instructions comprising interpreting a page, the page comprising an instantiation instruction that calls for instantiation of a behavior component that is synchronously bound to an element, the behavior component coded in a dynamic hypertext markup language and comprising a parsing instruction, and instantiating the behavior component in

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accordance with the instantiation instruction, the instantiation precluded by the parsing instruction from parsing static content in the behavior component.

The Office action rejected claim 29 as being obvious. As before, column 5, lines 14-18, 26-29 and 33-34 of Guthrie have been referenced. Applicants respectfully disagree.

Again, Guthrie teaches, generally, a method and system for injecting code into a web document prior to interpretation which is neither binding nor synchronous. As argued in a previous Office action response, Guthrie does not disclose a behavior bound to an element as claimed by applicants. Moreover, the system and method in Guthrie is neither concerned with nor even aware of the nature of the injectable component and certainly cannot be construed to teach a synchronously bound behavior. The very nature of loading a page and then injecting additional content is not synchronous. Thus, even if one were to somehow interpret injectable content as a bound behavior (which it is not) this still does not make it synchronous (*i.e.*, persistently and continuously bound to the element). Kerbs, whether considered alone or in any permissible combination with Guthrie, does not cure this major deficiency of Guthrie. Applicants submit that claim 29 is allowable over the prior art of record for at least these reasons.

For at least these additional reasons, applicants submit that all the claims are patentable over the prior art of record. Reconsideration and withdrawal of the rejections in the Office action is respectfully requested and early allowance of this application is earnestly solicited.

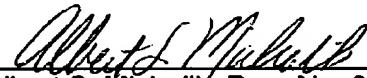
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CONCLUSION

In view of the foregoing remarks, it is respectfully submitted that claims 1-29 are patentable over the prior art of record, and that the application is in good and proper form for allowance. A favorable action on the part of the Examiner is earnestly solicited.

If in the opinion of the Examiner a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney at (425) 836-3030.

Respectfully submitted,



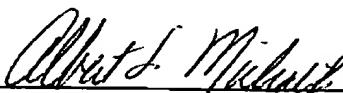
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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this Amendment, along with transmittal and facsimile cover sheet, are being transmitted by facsimile to the United States Patent and Trademark Office in accordance with 37 C.F.R. 1.6(d) on the date shown below:

Date: October 11, 2005


Albert S. Michalik

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